3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

doubtful. Apparently sleeping was not entirely restricted to the hammock among the Cayuá, however, as Rengger mentions children reclining on skins of animals.[a] There is some indication that hammocks were reserved for adults. Hammocks were hung all about the interior of the *tapúi*, in each family section, and could be unslung for extra space during the day.

Every aboriginal *tapúi* had its mortar, and probably most had several of these. Mortars were made of hard wood which had been burned and hacked until there was a depression in the end or in the side: both "vertical" and "horizontal" mortars may have been made, although the "vertical" was much more common.[a] Pestles were either simple, smoothed pieces of wood with rounded ends, or might be tapered in the middle to make a better grip and to lighten them. Sometimes the two pounding ends were different as well, one being regularly blunted while the other was flattened laterally, giving the pestle somewhat the appearance of a narrow, thick spatula.

Long troughs for *cāuī'* beer, cut out of logs in much the same manner as a dugout canoe, were usually to be found by each *tapúi*. Some of the present-day troughs are of great size—as much as thirty feet long and a yard or more wide inside—and it may be that formerly, when every house had its own trough (and without metal tools), they were never as large. The smaller troughs are still to be seen and are usually less than half the size of the largest observed.

Pottery vessels were used which were made by the Cayuá women themselves. The use of these vessels, however, may have been somewhat limited in that gourds could be used for many of the same purposes except direct cooking on the fire. The metal vessels of the European have practically replaced aboriginal pottery, although the use of the gourd still widely persists. Gourds were used to carry water, generally in this case being provided with a coarse net and carrying loop of vegetable fiber. Larger gourds (up to 2 feet in diameter) were used for storing *cāuī'*, tiny ones for keeping paint pigments and herbal remedies, and open half-gourds were used for drinking and eating dippers. The shell of the armadillo made a good container for corn and similar substances. Small gourds were sometimes ingeniously cut so that the top could be used as a close-fitting cover, held tight by cords passing through holes in both parts. Pyrographic decoration of gourds is suggested aboriginally.

Admirably woven, round, flat, sieves of hard, rattan-like material were used for straining *cāuī'* beer and in pounding corn, for separating out coarse grains which needed more grinding. Other basket work seems to have been limited to the woman's back basket, *mbunakū'* (or *adjakú*), worn across the

[a] Rengger, 1835, p. 117.

[a] It is possible, however, that the horizontal type of mortar is modern. It is now much used to crush the juice from sugar cane, an operation for which the upright type with smaller basin is ill suited. Sugar cane is, of course, post-contact.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

ner which could hardly have been possible without the machete. *Taquara* "boards" have no convenient application in connection with the older style of house, the *tapéi*. But they are more often than not used in building the smaller, individual family houses of the present day, which are peculiarly adapted to their use (see below, pp. 84–85). 177* 342 412

The use of canoes by the aboriginal Cayuá has been mentioned, although it is not borne out by their employment or manufacture at the present. If canoes were formerly used, the lack of them now would seem in some way related to acculturation and hence deserves mention here. Without canoes, the Cayuá do not travel extensively by families or groups. What travelling they do is done on foot—or individually by horse, in the case of a very few who own them. Although they may have been only slightly less sedentary aboriginally than now, it is probable that with canoes the Cayuá were formerly able to range much farther afield (or astream), using their villages as bases. 177* 178* 501

The ceramic art barely survives at Taquapiri. None of the younger women is learning to be a potter, and there are only four remaining potters among the oldest women. Of the four only two have recently made or intend to make any pottery in the near future, and even with them its manufacture is very irregular. Many of the girls and young women have never even seen pottery being made nor apparently expect to. The iron kettle and the tin can have almost entirely usurped the former place of pottery, and by far a majority of the households possess no pots of clay whatever. The woman's pipe, formerly of either wood or clay, tends to be of wood alone today. The conventional water gourd, and gourds and armadillo shells for other types of containers, however, have not declined in use. As a matter of fact, the gourd as a water vessel is quite practical and is to be found in not a few of the Neo-Brazilian households of the region. This continued use of gourds may derive some indirect advantage from the fact that gourds are also raised for use as *mbaraká*, ceremonial rattles, which are far from waning in importance. 178* 323 178* 415 [276] [824] [534]

Men's carrying bags or containers for personal objects, *mbokí* (?), differ from the aboriginal ones; nor are they now usually objects of the native weaver's art as formerly. Men's double carrying bags of store cloth, something like small saddle bags, are slung over the shoulder, with one pocket hanging in front and one at the back. They constitute an exclusively male method of carrying, but are only occasionally worn, however. For small personal objects the only container observed was a little leather pouch, probably Cayuá-made, fastened at the belt, and used by boys and men. [482] [562]

Clothing, except for men's belts, is now entirely of store cloth. It is home sewn (with trade needles and thread), and the styles are typically Cayuá. Presumably they reflect the style of army uniforms at one time issued to the Indians. Thus men's trousers are apparently modelled on original military or riding breeches, since forgotten, which fit closely at the knee. Even in the 177* 291

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It is not clear whether any differences exist between the present and the past with respect to individual vs. joint labor in hunting and fishing. Fishing and hunting today are almost exclusively individual affairs, and at most a man will take his wife and children along on an overnight fishing trip; but this may also have been common practice formerly. In one respect alone does it appear certain that some form of joint labor prevailed with regard to aboriginal fishing; this is in the use of fish damming methods and fish poison, clearly activities requiring the cooperative labor of several individuals. The only kind of fishing referred to at Taquapiri in 1943, however, was angling, an individual occupation. The abandonment of former joint methods of fishing is presumably related somehow to the loss or weakening of other forms of joint labor. If joint fishing parties were aboriginally organised within extended families, which seems likely, a relation may well exist between the mutual decrease and abandonment of these social forms.

A certain amount of specialization, which does not appear to have existed formerly, is now present in Cayuá economy. This takes at least two different forms: craft specialization and work alternatives. Work alternatives are in the sense of whether the individual works primarily for himself or for others. Craft specialization is the less important of the two as regards the amount and importance of goods thus produced. Work alternatives are mainly concerned with the *change*[39] relations existing between a majority of Cayuá men and local Brazilian settlers. The settlers employ these men to work—usually in their planted clearings (*roças*), employment technologically almost identical to the agriculture Cayuá know at home.

Individual craft specialization exists in both men's and women's crafts. It seems to occur in those aboriginal industries, in most cases, which have suffered a decline but whose products are still in some demand by the Cayuá, or sometimes by Neo-Brazilians as well. An example of female craft specialization today is the manufacture of hammocks, which are still widely used by the Cayuá and which also find an occasional buyer among the whites. A number of the younger women, although not all, are unable to make hammocks, or for some reason do not "wish" to do so. Hence they must obtain hammocks for their own use from a woman who can make them and who will do so for barter or for a price—infrequently the latter. The weaving of men's belts is another, although relatively unimportant, specialisation among female crafts. Pottery making might also be termed in a sense a specialization, since only a few women practice it; but here is a clearcut instance of an industry that is dying because there is practically no demand for its products. To what extent the same may be true of other specialised industries, except that demand has

[39] "Change" is a Brazilian regional expression, apparently with a Rio Grande do Sul provenience. In southern Mato Grosso it is widely used by the Cayuá and seems to have the meaning merely of working for hire for another—in their case almost always a Neo-Brazilian. The verb is *changar* or *changuear*.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

work to be accomplished but for the individual to do it single-handedly." The efficiency of the modern Cayuá worker in agriculture has but a single important acculturational cause (I. b.), the introduction of metal cutting implements. Particularly important are the machete, the axe, and the hoe, as has been mentioned. Compared with whatever aboriginal substitutes, there can be little question of the much greater efficiency of these metal tools.

In some sense, however, the several factors making for an increase in agriculture were generally influential here; otherwise there might have been no occasion for the individual to increase his agricultural efficiency and productivity. Obviously the relationship is close, and the distinction herewith of a separate item, the efficiency of the worker, must be justified by its later application in the analysis.

II. A. d. "A loss or diminution of certain native industries." The loss of native industries is a common acculturational effect, and there are a number of common causes. The primary cause in the Cayuá instance is (I. e.), the introduction of trade goods. Particularly significant have been trade goods which will substitute adequately for aboriginal handicraft products. Among these, for example, are the iron pots, bottles, and tin cans which have so successfully all but killed the native ceramic industry. Weaving has suffered much with the introduction of machine-made textiles, obtainable at the *bolichos*, and has been handicapped also by the change to clothing styles for which store cloth is more adaptable than aboriginal loomwork.

At the same time, some white trade items, such as (I. b.), metal tools, have had a contrary effect. Knives and machetes particularly have made certain crafts easier, largely crafts where cutting or splitting processes are important. This is evident in the preparation of vegetable fibers for weaving and tying, or the splitting of rattan for baskets and strainers. Such technological improvement, however, has not appreciably counteracted the decline of native industries whose products find ready trade goods substitutes.

By extension, factors which have enhanced trade relations between the Cayuá and the Neo-Brazilians have contributed to the loss or decrease of native industries. Aboriginal handicraft industries have thus been adversely affected by (I. f.) the growth of an external market for male Cayuá labor. Moreover, besides providing one more way in which the Cayuá may obtain trade goods substitutes, the *changa* (II. A. e.) in many cases occupies a great deal of work time. Frequently much of the time remaining after his own agricultural work is completed is used by the Cayuá in *changa* for local whites. The *changa* thus occupies some of the time formerly devoted to handicrafts.

The development of a small market for certain Cayuá products, including craft items, has also influenced the status of Cayuá handicrafts. The effect of a market (I. g.), however, has been to some extent ambivalent. On the one hand, the modern emphasis, in agricultural production, of a surplus which can

5: Métraux E-4 (no date) 1948 SM4 Guarani SM4

ARCHEOLOGY OF THE GUARANÍ AREA

Many archeological finds have been made in the area formerly inhabited by the *Guaraní*, but only a few systematic investigations have ever been undertaken of ancient sites or cemeteries. The attribution of some of the remains unearthed in former *Guaraní* territory is often uncertain because the *Guaraní* seem to have been late comers in the regions where we find them in the 16th century. They were preceded by people of different prehistoric cultures, some of which, such as the *Caingang*, have survived up to the present. The main problems center around classification of stone implements, which cannot always be easily distinguished from those produced by the early non-*Guaraní* population. Pottery, however, leaves little or no margin for doubt. The aboriginal occupants of Paraguay or southern Brazil had either no ceramics or else only a very crude ware. *Guaraní* ware presents the following features: A corrugated decoration produced by thumb impressions on the soft clay, linear designs in red and black on a whitish background, and the use of large conical chicha jars as funeral urns (pls. 11, 12).

There is a striking resemblance between the pottery of the ancient *Tupinambá* of the coast (Netto, 1885; Ihering, 1904) and that of the *Guaraní* of Paraguay. The modern *Chiriguano*, descendants of *Guaraní* invaders from Paraguay, still make chicha jars almost identical in shape and decoration to those which are so often unearthed in their home country. Moreover, typical *Guaraní* vases have been found associated with rosin labrets, a lip ornament still worn by modern *Caingué*.

Direct, or primary, urn burial was the usual form of interment among the *Guaraní* and persists among the *Chiriguano* of Bolivia. Archeology has amply confirmed the statements of early writers. The corpse was forced with the limbs flexed into a jar and covered with another vessel.

Ihering (1895, 1904), Mayntzhusen (1912), Ullrich (1906), Kunert (1890, 1891, 1892), Kunike (1911), Meyer (1896), Ambrosetti (1895 b), Vellard (1934), and Linné (1936) have described isolated finds. Max Schmidt (1932) has given a list of recent discoveries and has attempted to make a classification of the rich archeological material in the Museum of Asunción. Pottery of unmistakable *Guaraní* origin has been collected on the islands of the Paraná Delta (pl. 11, *top, center*). They have been published and discussed by L. M. Torres (1913) and Outes (1917, 1918). Lothrop (1932, pp. 122-146) has given us a careful description of the results of his investigation in a *Guaraní* cemetery at Arroyo Malo, a small tributary of the Luján River, east of El Tigre, in the Province of Buenos Aires. Serrano (1936) has dealt with *Guaraní* archeology in connection with his study of the ancient native cultures of Uruguay.

The ware found in areas historically occupied by *Guaraní* tribes consists mainly of funeral urns, large plates or vessels used as lids for these urns, and some pots which formed part of the funerary equipment.

5: Métraux E-4 (no date) 1948 SM4 Guarani SM4

501 [171] rivers. They propel these craft with poles. The *Cayuá* of Brazil, who reside near larger streams, are good boatmen and travel a great deal in large dugouts, 8 to 12 feet (2.5 to 3.5 m.) long.

489 [285] **Carrying devices.**—Goods are carried in cylindrical or rectangular twilled baskets, reinforced with a wooden frame. *Paĩ'* carrying baskets are relatively extensible and are made of intertwined pindo leaves, the midribs strengthening the whole structure. Carrying nets made of bark [171] strips were clearly introduced with the maté industry. The *Guaraní* skin [178] bag is certainly older than the net and appears to be an article that originated locally or was borrowed from tribes to the south.

482 854 Babies are ordinarily carried in a sling, straddling their mothers' hips, but they may be transported in baskets or in skin bags.

MANUFACTURES

285 [824] [531] **Basketry.**—The *Guaraní* weave temporary baskets of the pinnae of pindo palms, the midrib serving to reinforce the rim. More permanent containers are made of twilled fabrics of tacuarembo strands. They are ornamented with black, geometrical motifs.

283 [824] **Spinning and weaving.**—Thread is made of cotton carded with a bow, or of *Bromelia*, nettle (*Urera grandifolia*), and palm (*Acrocomia totai*) fibers.

286 [293] [531] [386] [824] [178] [177] Cotton is spun with a drop spindle and woven on a vertical loom with a circular warp. Cloth is generally white with alternate brown and black stripes, dyed with the bark of *Peltophorum dubium* and *Trichilia catigua*. The technique of darning weft strands through warp elements attached to a vertical loom, though it has been observed in modern times, was probably an early practice abandoned when true weaving became general, probably through *Arawak* influence.

323 178 **Pottery.**—*Guaraní* ceramics are known through archeological finds in São Paulo, Rio Grande do Sul, near Asunción in the Argentine territory of Misiones, and on the island of Martín García. The largest specimens are funeral urns, which also served as beer containers. Small dishes and bowls have a white interior slip which bears sigmoid figures, curves, triangles, mazes, and "grecques." The large jars and ordinary ware have continuous rows of thumbnail or other impressions over their entire surface. The *Caingué*, who have practically given up pottery, make only a ware that is decadent in quality and shape. Bowls with a flaring base ("compotera" types) may perhaps be a survival of a pre-Columbian type.

415 **Leather work.**—The *Caingué* carry their small possessions in skin bags.

411 524 **Weapons.**—*Caingué* bows are made of palm wood, guayaihwi (*Patagonula americana*), or ihvira payú, ihvira pepé (*Holocalyx balansae*). They are 6 to 8 feet (2 to 2.5 m.) long, circular or oval in cross section, and entirely or partially wrapped with guembé bark (*Philodendron* sp.)

/330 cont./

C & 177 The Chiriguano adopted this civilization of a superior type with all the more ease by reason of the numerous affinities it offered with their own. The whole Amazonian and Guianan side of the Chané civilization was composed of industries, techniques, and practices with which the Chiriguano, having come from the tropical regions of America, from a country of great forests and rivers, were already acquainted in part. Thus, for example, the Guarani, upon arriving among the Chané, found again the hammocks, grain sieves, mortars, baskets, and weapons to which they were accustomed.

C & Ce 177 The contribution of the Chané consisted of the very cultural elements they had received from the Andean peoples, that is, clothing (camisetas, headband, etc.), the liking for silver ornaments, some artistic motifs, certain pottery forms, etc., things which were scarcely beginning to filter into Ce [323] Paraguay. The influence of the Chané was decisive in the sphere of pottery.

C & 177 563 323 [161] Ce 178 323 177 The civilizing action of the Chané upon the Chiriguano had as agent the Chané women whom the Chiriguano captured and married. The Guarani had certainly taken along with them only a small number of girls. They themselves were few in number at the beginning, 4,000 according to Lizárraga (Vol. I, p. 260). In uniting with the Chané women whom they carried off by the thousands, they renewed with their blood all the feminine aspects of their industry. It is the women, for example, who make /331/ the pottery; a man would not be able to engage in it without losing prestige. So we see the pottery of the Guarani undergo important modifications and change completely. Today pottery is their glory; and of their ancient ceramics they have kept only the humble pots or the brewing vats for chicha. In spite of their decline the Chané have maintained their traditional superiority in this art, and they continue to produce vessels which, if they are not comparable to those of the past, are often very beautiful.